Publish or perish: power and bias in peer review processes in mathematics education journals

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The “publish or perish” slogan represents a constant pressure to survive in academia and to be considered a competent professional. This symposium will open conversation among researchers, editors and reviewers to address issues of diversity, ethics and politics in the publication process. We will facilitate discussions with colleagues around the world to explore biases in the scholarly publication process to uncover the mechanisms and practices responsible for the underrepresentation of particular groups of researchers. The symposium will be a meeting point, to find and explore ways to address biases in the processes of peer review. We hope to contribute to the efforts to make the publishing process more transparent and accessible to researchers.

Rationale

The publication of research in scholarly journals is a critical goal for researchers in mathematics education and in every academic field. This goal not only relates to scientific interests such as expanding the extant knowledge, disseminating novel theories and methods and engaging in academic conversations in our field. Getting papers published in prestigious mathematics education journals is almost the exclusive path towards academic recognition, promotion and job stability for novice and early career researchers. It becomes an accountability system that most universities use to measure academic productivity. The “publish or perish” slogan represents the Damocles’ sword hanging over the researchers’ neck and constitutes a constant pressure to survive in academia.

Researchers are expected not only to continuously publish their work but also to do so in high-impact journals. This is because, as Andrade-Molina, Montecino and Aguilar (2020) argue, publishing in well-known journals in the field adds value to both researchers and their institutions of affiliation. As different ranking systems consolidate in mathematics education, publishing in journals indexed in, for instance, the Web of Science and Scopus, constitutes an indicator of the researchers’ productivity, a measure of the quality of their work and a criterion for allocating resources (Andrade–Molina, Montecino & Aguilar, 2020). A hierarchical system of universities and researchers is then introduced, validated and sustained; in this sense, scholarly publication transcends academic purposes and becomes a contested arena where different political and economic interests emerge shaping the entire process. Moreover, the publication process shapes ways of normalizing and conducting the researchers’ work by delineating what is considered theoretically and methodologically valuable for academia and therefore publishable. In this vein, it draws an aesthetics according to what is established as “good/desired” research.
The phenomenon of exclusion in the mathematics education system of practices has been widely discussed (e.g., Louie, 2017). Nevertheless, little is known about inequity and marginalization in the processes of scholarly publication (Meaney, 2013). Until just recently and within the context of strong anti-Black racism protests and the consolidation of the feminist movement worldwide, calls for unpacking mechanisms of exclusion that lead to the underrepresentation of racially and ethnically minoritized scholars and female researchers in scholarly publications have emerged (Wagner et al., 2020). In particular, questions about how the review process is conducted and handled by editors have been voiced in different contexts. It is argued that, although peer review contributes to move the scientific field forward by awarding high quality research, far from being an objective and rational process, it is shaped by issues of power that end up rendering invisible particular voices and epistemes in academia. Although peer review is either a single-blind or double-blind process to ensure objectivity, transparency, impartiality and fairness, different studies evidence that these apparent goals are not realized (Lee et al., 2012).

Lee et al. (2012) point to research in diverse fields, which uncovers the existence of different biases during the review process ranging from errors in assessing a submission’s “true quality” to the social characteristics of the authors. For instance, dominant representations about what high-quality research looks like may lead the reviewers to fail to assess the real qualities of the proposed work. In mathematics education, for example, prominence is given to cognitive investigations while sociopolitical and critical studies are delegitimized by the “where is the math” question (Martin et al., 2010). Also, in our field there are clear disparities among countries and regions in terms of which research gets published (Mesa & Wagner, 2019). Social characteristics of the authors also seem to play a critical role in peer review. These biases result in the differential evaluation of an author’s submission as a result of her/his perceived membership in a particular social category. As Lee et al. (2012) argue, “social bias challenges the thesis of impartiality by suggesting that reviewers do not evaluate submissions—their content and relationship to the literature—indipendently of the author’s (perceived) identity” (p. 11). Thus, national origin, language, gender, content, racial and ethnic biases seem to shape the review process.

With these ideas in mind, this symposium has the potential to generate discussions around the following areas, which we hope the participants will engage and contribute:

- What are the main obstacles that mathematics education researchers from underrepresented groups face when trying to get their research published?
- How do the researchers’ social identities shape the chances of getting a paper published in a prestigious journal in the field?
- What is considered as high-quality research in mathematics education?
- What and whose knowledge are valued in mathematics education?
- What and whose knowledge are ignored in mathematics education?
- What can editors do to mediate or control biases in the peer review process?
- What is the impact of these values and practices on dominant views of what mathematics education looks like and what its concerns are?
- What are the ethical responsibilities of reviewers and editors?
- What can scholars in the field do to help develop the diversity of published research?

**Aim**

In this symposium we attend Mesa and Wagner’s (2019) call for open conversations among researchers, editors and reviewers to address issues of diversity, ethics and politics involved in the publication process. We call on mathematics education researchers worldwide to fully engage in discussing their experiences in getting their papers published in high-impact mathematics education journals. The purpose of this symposium is twofold. First, it is aimed at facilitating discussions with colleagues around the world to explore biases in the publication process in order to uncover the mechanisms and practices responsible for the underrepresentation of particular groups of scholars in scholarly publications. Second, the symposium is thought as a meeting point to find and explore ways to address biases in the processes of peer review. We hope to contribute to efforts to make publishing processes more accessible to researchers who identify with groups that have been marginalized, as well as, to unpack mechanisms of power that normalize and control us.

**Planned Structure**

The introduction to the symposium (5 minutes) will be followed by brief input in which presenters will draw on their own experiences as researchers, reviewers, editors and editorial members. Melissa Andrade-Molina will problematize the ranking system of journals that govern the publishing practices in mathematics education (5 minutes). Alex Montecino will discuss a pseudo aesthetic shaped in mathematics education research (5 minutes). Luz Valoyes-Chávez will discuss research about gender, racial, language and national biases in peer review (5 minutes). David Wagner will outline recent discussions pursuing anti-racism amongst editors of mathematics education journals (5 minutes). Symposium participants will then be asked to bring their own histories to these thought-pieces and questions in small group discussion and plenary report-backs (45 minutes). The voices of participants with underrepresented identities will be encouraged and promoted in this time. Finally, participants will propose and discuss possible pathways for action to address the challenges identified in the symposium (20 minutes).

**References**


